

NEW SYNONYMY BETWEEN *OXYOPES GRACILIPES* (WHITE) AND *OXYOPES MUNDULUS* L. KOCH (OXYOPIDAE: ARANEAE)

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A new synonymy is proposed between *Oxyopes gracilipes* (White, 1849) and *Oxyopes mundulus* L. Koch, 1878. It is based on the examination and comparison of the type of *O. mundulus* and authenticated samples of *O. gracilipes*. A neotype is designated for *O. gracilipes*. The distribution of *O. gracilipes* in Australia is shown. It is proposed that *O. gracilipes* is Australian in origin. □ *Oxyopidae, Oxyopes, synonymy, Australia, New Zealand, neotype.*

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The Oxyopidae (lynx spiders) of New Zealand were revised and found to comprise only one species *Oxyopes gracilipes*, also present in Tasmania (Vink & Sirvid, 1998). Shortly after the publication of that paper one of the authors (CJV) had the opportunity to examine specimens of Oxyopidae in the Western Australian Museum, Perth and the Australian Museum, Sydney. Specimens identified by Judy Grimshaw as *Oxyopes mundulus* in both collections appeared identical to *O. gracilipes*.

To clarify the situation, we borrowed the holotype *O. mundulus* and compared it to specimens of *O. gracilipes* and other specimens identified as *O. mundulus*.

Roewer (1954) listed 16 Australian species in the family Oxyopidae, of which 14 were in the genus *Oxyopes*. The only published taxonomic work on Australian oxyopids since then was the description of two new species in the genus *Hamataliwa* by Grimshaw (1989). This was part of an unpublished revision of the Oxyopidae of Australia (Grimshaw, 1991).

*Abbreviations.* AM = Australian Museum, Sydney; LUNZ = Entomology Research Museum, Lincoln University; MONZ = Museum of New Zealand Te Papa Tongarewa, Wellington; WAM = Western Australian Museum, Perth.

#### COMPARISON OF THE TWO SPECIES

Koch's (1878) description and illustrations of *Oxyopes mundulus* were not accurate enough for a conclusive comparison with *O. gracilipes*. The female holotype of *O. mundulus* was borrowed from the Zoological Museum, Hamburg, examined and compared to specimens of *O.*

*gracilipes*. Overall appearance, size, colour pattern, spination and genitalic structure of the type of *O. mundulus* were identical to those of specimens of *O. gracilipes*. No significant qualitative differences were found among specimens of *O. gracilipes* and *O. mundulus*, including comparisons of male palpal structure and internal female genitalia.

We have also examined the types of *Oxyopes rubicundus* L. Koch, 1878, *Oxyopes elegans* L. Koch, 1878 and specimens of an undescribed Australian *Oxyopes*. It appears that *O. gracilipes* is part of a group of closely related Australian species, which includes *O. rubicundus*, *O. elegans* and an undescribed *Oxyopes* sp.

#### SYNONYMY

##### *Oxyopes gracilipes* (White, 1849)

*Sphasus gracilipes* White, 1849: 5.

*Oxyopes mundulus* L. Koch, 1878: 1025, pl. xc, fig 3. (New synonymy)

*Sphasus gregarius* Urquhart, 1885: 51, pl. xi, figs 20a-e.

*Oxyopes gracilipes* (White); Vink & Sirvid, 1998: 1-9.

**TYPE MATERIAL.** *Sphasus gracilipes* White 1849:5. This species was described from an unspecified number of unsexed specimens collected from New Zealand. Type/s not located by CJV after a thorough search in the Natural History Museum, London (BMNH), where type specimens of other species described by White were deposited.

*O. mundulus* L. Koch 1887:1025. This species is described from a female collected from Sydney, Australia. The type is part of the Godeffroy Museum collection housed in the Zoological



FIG. 1. Distribution of *Oxyopes gracilipes* (White) in Australia.

Museum, Hamburg (ZMH) (Godeffroy Collection Nr. 16501 (Rack, 1961)).

COMMENTS. Our examination of a large range of material leads us to conclude that the type and other Australian specimens identified as *O. mundulus* are the same species as *O. gracilipes*. We therefore consider *Oxyopes mundulus* L. Koch, 1878 to be a junior synonym of *Sphasus gracilipes* White, 1849.

#### NEOTYPE DESIGNATION

White's (1849) description of *Sphasus gracilipes*, while limited, is sufficient to identify New Zealand's single oxyopid species. His placement of this species in the genus *Sphasus* and his description of the abdomen as 'attenuated at the end' clearly indicate a species of Oxyopidac. White, a British entomologist, would almost certainly have been familiar with oxyopids because of the presence of *Oxyopes heterophthalmus* Latreille, 1804 in England.

White's type material was reported to be in the BMNH (Forster, 1967), but could not be located after thorough searching and is now presumed lost.

With only one species of oxyopid recognised for New Zealand, designation of a neotype was not considered necessary. However, the subsequent discovery of this species in Australia, and the recognition of the synonymy with *O. mundulus* means it is now advisable to designate a neotype to fix the concept of *Sphasus gracilipes* White, 1849 as interpreted and redescribed in Vink & Sirvid (1998).

NEOTYPE. Here designated, malc, in 70% ethanol, from New Zealand, AK, near Clevedon, Thorps Bush, sweeping streamside vegetation, 27.xi.1982, P. Maddison, deposited in New Zealand Arthropod Collection, Auckland, New Zealand. The neotype locality within New Zealand is arbitrary as White simply recorded it

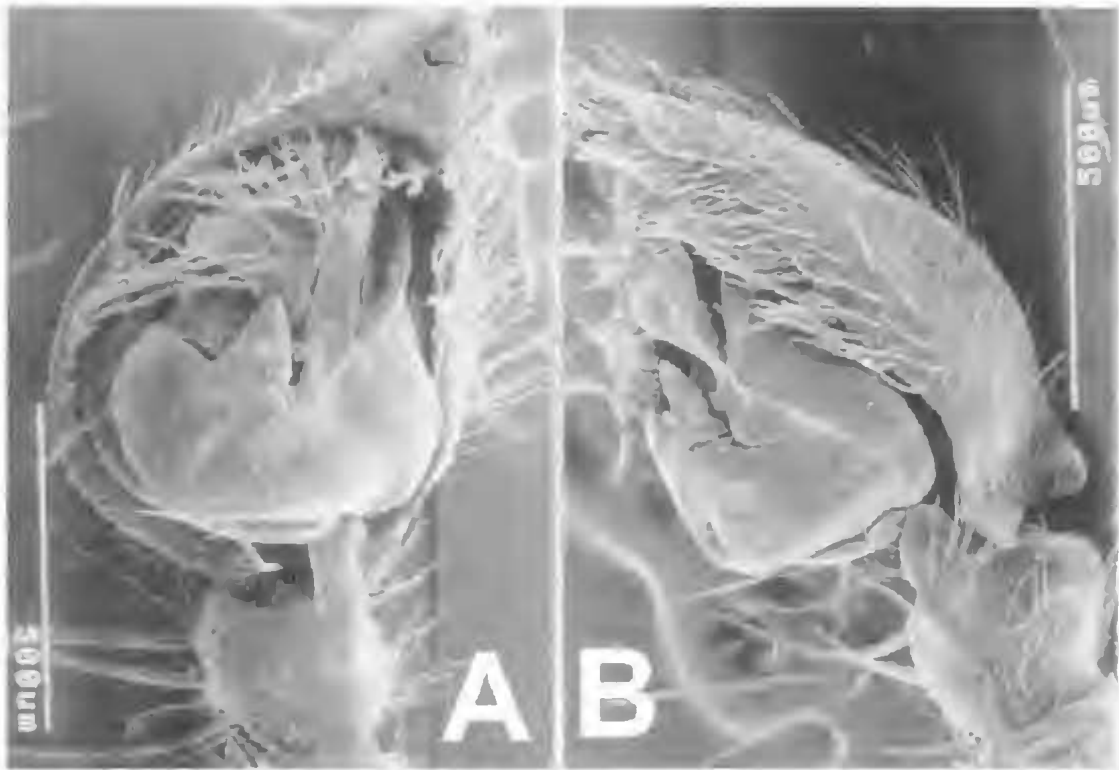


FIG. 2. *Oxyopes gracilipes* (White), male palp, tibia, bulb and cymbium, dorsal left; A, ventral view; B, retrolateral view.

as '*Hab. New Zealand*'. This specimen is described and illustrated in Vink & Sirvid (1998).

OTHER MATERIAL. QUEENSLAND: ♀, Eurimbula, SE of Gladstone, 24°11'S, 151°50'E, iii.1975, C. Horseman (AMKS12784); QMS49010: ♀, Lake Broadwater, Lakeview, 27°20'S 151°05'E, SE Qld, lake edge, 26 Jan 1984, M. Bennie; QMS49011: ♂, Brisbane, Acacia Ridge, 27°28'S 153°02'E, SE Qld, malaise trap, Jan 1979, E.C. Dahms; QMS49012: ♀, Lake Broadwater via Dalby, 27°20'S 151°05'E, SE Qld, on grass, 20 May 1984, M. Bennie; QMS49013: ♂, ♀, Mt Tamborine, 27°55'S 153°11'E, SE Qld, sweeping/beating, 10 Jul 1974, C. L. Wilton; QMS49014: ♀, Junction View, S Gatton, 27°34'S 152°16'E, SE Qld, 30 Dec 1984, A. Rozefelds; QMS49015: ♀, 1 juv., Laidley Ck, Laidley, 27°44'S 152°22'E, SE Qld, 27 Dec 1980, M. Grant; QMS49016: 2♀, Lake Broadwater, 27°20'S 151°05'E, SE Qld, 12 Feb 1984, M. Bennie; QMS49017: ♀, Monto, 3.2k N, 24°50'S 151°07'E, SE Qld, 19 Apr 1971, R. Monroe; QMS49018: 3♂, 3♀, Lake Broadwater, NE shore, 27°20'S 151°05'E, SE Qld, sweeping, 26 Nov 1984, M. Bennie; QMS47944: ♀, Mt Coolum, W slopes, 26°34'S 153°05'E, SE Qld, open forest, Jan 1984, B.R. Jahnke. WESTERN AUSTRALIA: ♂, Miling, 30°29'S, 116°22'E, 22.xi.1974, A. Page (WAM 87/1739); ♂, Darlington, 31°54'S, 116°04'E, v.1975, G.H. Lowe (WAM

87/1551); ♂, Darlington, 31°54'S, 116°04'E, iii.1976, G.H. Lowe (WAM 87/1553); ♂, Mt Lawley, 31°56'S, 115°53'E, 19.x.1986, J.M. Waldoock (WAM 87/1763); ♂, Forrestfield, Whistlepipe Gully, 31°59'S, 115°58'E, 4.ix.1986, J.M. Waldoock (WAM 87/1558); ♀, Kelmscott High School, 32°07'S, 116°01'E, A. Page (WAM 87/1722); ♂, Furnissdale, 32°34'S, 115°46'E, 22.x.1984, F.H. Uther-Baker (WAM 87/1560); ♂, Grass Patch, Fitz., 33°14'S, 121°43'E, 16.xi.1978, A.F. Longbottom (WAM 87/1567); ♂, Grass Patch, Fitz., 33°14'S, 121°43'E, A.F. Longbottom (WAM 87/1569); ♀, Glenbourne, near Margaret River, 33°53'S, 115°00'E, 2.i.1978, P.G. Kendrick (WAM 87/1732); ♂, 15km SW of Bridgetown, 34°04'S, 116°06'E, 8.xii.1985, J.M. Waldoock (WAM 87/1533); ♀, 15km SW of Bridgetown, 34°04'S, 116°06'E, 29.xi.1986, D. Terry (WAM 87/1535); ♀, 15km SW of Bridgetown, 34°04'S, 116°06'E, 29.xi.1986, D. Terry (WAM 87/1536); ♂, 15km SW of Bridgetown, 34°04'S, 116°06'E, 29.xi.1986, D. Terry (WAM 87/1537); ♂, 15km SW of Bridgetown, 34°06'S, 116°06'E, 29.xi.1986, D. Terry (WAM 87/1539). NEW SOUTH WALES: ♂, Green Pidgeon near Kyogle, 28°30'S, 153°04'E, 21.xi.1984, E.D. Scambler (AM KS16310); ♀, Washpool SF, Moogem Rd, 29°16'S, 152°22'E, 9.ii.1982, C. Horseman (AMKS9077); ♀, 18km N of Taree, 31°48'S, 152°29'E, 10.xii.1981, M. Gray & C. Horseman (AM KS10188); ♂, 7km N of Taree, 31°53'S,

152°29E, 6.xii.1981, M. Gray et al. (AMKS9384); ♂, 6km S of Forster, 32°12S, 152°31E, 10.xii.1981, M. Gray & C. Horseman (AM KS10206); ♀, 6km S of Forster, 32°12S, 152°31E, 10.xii.1981, M. Gray & C. Horseman (AM KS10210); ♀, Pittwater, Sydney, 33°38S, 151°18E, 1.i.1967, J. Child (AM KS17305); ♂, Mascot, 33°56S, 151°12E, 21.x.1969, R.E. Mascord (AM KS17308); ♂, ♀, Botany, 33°57S, 151°12E, 3.x.1965, R.E. Mascord (AM KS17284).

AUSTRALIAN CAPITAL TERRITORY: ♀, Canberra, 35°17S, 149°13E, 7.iii.1970, H. Evans (AM KS17285).

TASMANIA: ♀, Queens Domain, Hobart, 42°52S, 147°19E, 2.xii.1963, V.V. Hickman (AM KS30787); ♀, Queens Domain, Hobart, 42°52S, 147°19E, 13.xii.1963, V.V. Hickman (AM KS30788); ♀, Queens Domain, Hobart, 42°52S, 147°19E, 1.xii.1966, V.V. Hickman (AM KS30790); Queens Domain, Hobart, 42°52S, 147°19E, ii.1977, V.V. Hickman (AM KS30789); 2♀, Queen's Domain, Hobart, 42°52S, 147°19E, 20.xi.1997, L.J. Boutin, (MONZ); ♂, New Town, 42°53S, 147°19E, x.1967, V.V. Hickman (AM KS30785).

NEW ZEALAND: 2♀, Cuvier I., 36°26S, 175°46E, vii.1943, R.R. Forster, (MONZ); 4♂, 2♀, Korapuki I., 36°40S, 175°51E, 29.xi.1997, B.M. Fitzgerald, (MONZ); ♂, Stump Bay Swamp, near Lake Taupo, 38°57E, 175°49S, 9.xi.1994, C.J. Vink & A.D. Blest (LUNZ); ♂, ♀, Cape Palliser, 41°37S, 175°15E, 26.xi.1974, (MONZ); ♀, Travis Swamp, Christchurch, 43°30S, 172°42E, 1.xii.1995, R.P. MacFarlane (LUNZ); ♂, Hinewai Reserve, malaise trap, 43°50S, 173°04E, 10.xi.1997, J.B. Ward (LUNZ); 3♀, Cardrona Valley, 44°47S, 169°05E, 9.i.1999, C.J. Vink, (LUNZ).

DISTRIBUTION. *Oxyopes gracilipes* is found in Australia south of 24°11'S. The Australian geographic distribution (based on museum collection records) of *O. gracilipes* is shown in Fig. 1.

REMARKS. A full description of *Oxyopes gracilipes* and notes on its biology are given in Vink & Sirvid (1998).

#### DISCUSSION

*O. gracilipes* is the only species of oxyopid found in New Zealand (Vink & Sirvid, 1998) and has been collected from sub-tropical and temperate regions of Australia. A comparison of the palps and epigyna of *O. gracilipes* and those of *O. rubicundus*, *O. elegans* and another undescribed Australian *Oxyopes* sp. reveals that these four species are closely related.

The presence of at least four similar species of *Oxyopes* in Australia and the presence of only one of these species, *O. gracilipes*, in New Zealand leads us to believe that *O. gracilipes* has established in New Zealand from Australia relatively recently. *Oxyopes* species are known to disperse by ballooning (Brady, 1964) and it is

possible that *O. gracilipes* arrived in New Zealand from Australia by this method. Its widespread distribution throughout Australia and New Zealand and lack of divergence in New Zealand indicates that this species is highly mobile.

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